REMARKS

Applicant has studied the Office Action dated October 6, 2004, and has made amendments to the claims. Claims 1-20 are pending. Claims 1, 7, 11 and 17 are independent claims. Claims 1, 3, 4, 7, 9, 11, 13, 14, 17, 19 and 20 have been amended.

The amendments to claims 3, 4, 9, 13, 14, 19 and 20 are intended to correct typographical errors and more clearly claim the invention and are not related to patentability. No new matter has been entered. It is submitted that the application, as amended, is in condition for allowance. Reconsideration and reexamination are respectfully requested.

Amendments to Specification

Amendments have been made to the specification at pages 3 and 9 to correct grammatical and typographical errors and provide a more concise description of the invention. No new matter as been added as the amendments have support in the application as originally filed.

§ 102 Rejections

Claims 1-20 were rejected under 35 U.S.C. § 102(b) as being anticipated by Hardwick et al. (U.S. Patent No. 5,216,747). This rejection is respectfully traversed.

It is respectfully noted that a proper rejection for anticipation under § 102 requires complete identity of invention. The claimed invention, including each element thereof as recited in the claims, must be disclosed or embodied, either expressly or inherently, in a single reference. Scripps Clinic & Research Found. v. Genentech Inc., 927 F.2d 1565, 1576, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991); Standard Havens Prods., Inc. v. Gencor Indus., Inc., 953 F.2d 1360, 1369, 21 U.S.P.Q.2d 1321, 1328 (Fed. Cir. 1991).

With regard to independent claims 1, 7, 11 and 17, it is respectfully noted that with this paper, those claims have been amended to recite that the voicing level is calculated without utilizing a threshold such that a mixture of a voiced element and an unvoiced element are represented. Support for the amendments is found in the application as originally filed at page 9, ll. 14-27. It is respectfully submitted that Hardwick et al. fails to disclose this limitation.

It is submitted noted that Hardwick et al. discloses the prior art method that is also disclosed in the Background section of the present specification at page 4, line 29 to page 5, line 6, page 5, ll. 20-27 and Fig. 2, the method utilizing a threshold in order to differentiate between voiced and unvoiced information to produce a binary value that indicates that a band

contains either voiced or unvoiced information. On the other hand, the present invention as recited in independent claims 1, 7, 11 and 17, is directed to a method and apparatus that avoids the disadvantages posed by the prior art method disclosed in Hardwick et al., specifically that the threshold and resulting binary information provides no value representing an intermediate level and is subject to errors if the threshold is wrongly calculated. See specification at page 6, ll. 1-8.

It is respectfully noted that the portion of Hardwick et al. that the Examiner asserts, on page 3 of the Office action, as disclosing "calculating a voicing level" indicates that "voicing measure D_i defined by [equation] (19)" is "compared against a threshold function" such that "[i]f D_i is less than the threshold function then the l'th frequency band is determined to be voiced" and "[o]therwise the l'th frequency band is determined to be unvoiced." It is respectfully submitted that nowhere in Hardwick is it disclosed that the determination between a voiced and unvoiced band is performed without utilizing a threshold such that a mixture of a voiced element and an unvoiced element are represented. On the contrary, it is further respectfully submitted that the determination disclosed in Hardwick et al. is either a voiced band or an unvoiced band with the band processed as one of voiced and unvoiced.

Therefore, it is respectfully asserted that independent claims 1, 7, 11 and 17 are allowable over the cited reference. It is further respectfully asserted that claims 2- 6, which depend from claim 1, claims 8-10, which depend from claim 7, claims 12-16, which depend from claim 11, and claims 18-20, which depend from claim 17, also are allowable over the cited reference.

Furthermore, with regard to claims 2, 3, 8 and 9, it is respectfully submitted that the Examiner has misinterpreted the disclosure in Hardwick et al. The Examiner asserts, at page 3 of the Office action, that Hardwick et al. teaches, respectively, "the voicing level is calculated by subtracting the normalized spectral difference energy from 1 (as D, according to equation 20 ...)" and "the voicing level is set to a value between 0 and 1 (Col. 6, lines 40-50)."

It is respectfully submitted that "voicing measure D_i" disclosed in Hardwick et al. at col. 6, ll. 40-50 is not analogous to the "voicing level" recited in the claims and disclosed in the specification of the present invention, at page 9, ll. 14-21 and in step S37 of Fig. 5, as the Examiner asserts, but rather is analogous to the "difference energy between an input spectrum and a synthetic spectrum" disclosed in the specification of the present invention, at page 9, ll. 9-13 and in step S35 of Fig. 5. It is further respectfully submitted that Hardwick et al. discloses that the "voicing measure D_i" is "compared against a threshold function" in order to calculate a "voicing level" that is analogous to that recited in the claims of the present invention and,

therefore, that Hardwick et al. does not disclose a voicing level calculated by subtracting the normalized spectral difference energy from 1, as recited in claims 2 and 8 of the present invention or a voicing level set to a value between 0 and 1, as recited in claims 3 and 9 of the present invention. See Hardwick et al. at col. 6, ll. 51-57.

Therefore, it is respectfully asserted and that claims 2, 3, 8 and 9, as well as similar claims 12, 13, 18 and 19, are allowable over the cited reference irrespective of their dependency from, respectively, independent claims 1, 7, 11 and 17.

CONCLUSION

In light of the above remarks, Applicant submits that claims 1-20 of the present application are in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

U.S. Patent Nos. 5,581,656 and 5,226,108 to Hardwick et al., 6,067,511 to Grabb et al., 5,809,455 to Nishiguchi et al., and 5,890,108 to Yeldener have been cited as having been made of record and not relied upon. Applicant has reviewed the cited references and believes that the claims of the present invention are allowable over the cited references individually or in combination with the other cited references.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein; and no amendment made was for the purpose of narrowing the scope of any claim, unless Applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California, telephone number (213) 623-2221 to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,

LEE, HONG, DEGERMAN, KANG & SCHMADEKA

Date: January 6, 2005

By: _____

Richard C. Salfelder
Registration No. 51,127
Attorney for Applicant

Customer No. 035884

801 S. Figueroa Street, 14th Floor
Los Angeles, California 90017
Telephone: 213-623-2221
Facsimile: 213-623-2211